UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,106	08/25/2003	Andrew James Booker	550-462	9839

23117   7590   10/02/2007
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EXAMINER
KHATRI, ANIL

ART UNIT	PAPER NUMBER
2191	

MAIL DATE	DELIVERY MODE
10/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/647,106	BOOKER ET AL.
Office Action Summary	Examiner	Art Unit	
	Anil Khatri	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 August 2007</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-42</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-42</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Response to Amendment

1.   This action is in response to the request for reconsideration filed on 8/6/07.

2.   As per applicant request claims 1-42 has been considered but they are not persuasive.

3.   Examiner has withdrawn 35 USC 101 rejection of claim 1-42 upon clarification filled by the applicant.

4.   Claims 1-42 are rejected under 35 U.S.C. 102(b) as being anticipated by *Cmelik et al* USPN 6,031,992.

In remarks applicant argues,

I. Predetermined generated instruction having a corresponding condition code.

II. Replacing predetermined generated instruction with corresponding instruction from sequence of instruction so as to cause corresponding instruction to be executed.

In response to applicant's arguments

I. It was noted that cited reference fairly suggest predetermined generated instruction having a corresponding condition code   (column 28, lines 9-34, if an instruction is to be run but once, it may be that the time required to accomplish further reordering and other optimization is greater than the time to execute the translation as it exists at this point. If so, one embodiment of the present invention ceases the translation at this point, stores the translation, then executes it to determine whether exception or errors occur. In this embodiment, steps of reordering and other optimization only occur if it is determined that the particular translation will be run a

number times or otherwise should be optimized. This may be accomplished, for example by

placing host instructions in each translation, which count the number of times a translation, is

executed and generate an exception (or branch) when a certain value is reached. The exception

(or branch) transfers the operation to the code morphing software, which then implements some,

or all of the following optimizations and any additional optimizations determined useful for that

translation. A second method of determining translations being run a number of times and

requiring optimization is to interrupt the execution of translations at some frequency or on some

statistical basis and optimize any translation running at that time. This would ultimately

provide that the instructions most often run would be optimized. Another solution would be to

optimize each of certain particular types of host instructions such as those, which create loops

or are otherwise likely to be run most often) and (column 19, lines 42-56, The manner in which

the primitive instruction which precedes the branch instruction may update the value of the

instruction pointer for the target processor is to test the condition code for the branch in the

condition code registers and then determine whether one of the two branch addresses indicated

by the condition controlling the branch is stored in the translation buffer 14. The first time the

sequence of target instructions is translated, the two branch targets of the host instruction both

hold the same host processor address for the main loop of the translator software. When the

host translation is completed, stored in the translation buffer 14, and executed for the first time,

the instruction pointer is updated in the target instruction pointer register (as are the rest of the

target registers); and the operation branches back to the main loop). Therefore, examiner

interprets that determined instruction has been generated which includes condition code for first

time sequence of target instructions to be executed.

II. It was also noted that cited reference fairly suggest replacing predetermined generated

instruction with corresponding instruction from sequence of instruction so as to cause

corresponding instruction to be executed (column 32, lines 28-42, The above sample illustrates

an optimization which speculates that the translation of the primitive target instructions making

up the entire translation may be accomplished without generating an exception. If this is true,

then there is no need to update the official target registers or to commit the uncommitted stores

in the store buffer at the end of each sequence of host primitive instructions which carries out an

individual target primitive instruction. If the speculation holds true, the official target registers

need only be updated and the stores need only be committed once, at the end of the sequence of

target primitive instructions. This allows the elimination of two primitive host instructions for

carrying out each primitive target instruction. These are replaced by a single host primitive

instruction which updates the official target registers and commits the uncommitted stores to

memory). Therefore, examiner interprets that instruction replacing takes place and at the same

time instructions, which also updates the target, register as well.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period
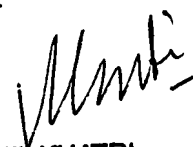
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Anil Khatri whose telephone number is 571-272-3725. The

examiner can normally be reached on M-F 8:30-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ANIL KHATRI
PRIMARY EXAMINER

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